Mindanao State University

**ILIGAN INSTITUTE OF TECHNOLOGY**

College of Education

**Integrated Developmental School**

**COURSE SYLLABUS**

**AY 2015 – 2016**

1. **COURSE INFORMATION**

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| COURSE NUMBER AND TITLE | Earth Science | | |
| COURSE CREDIT | 1.7 Units for 1 Semester only | | |
| COURSE COMPONENT | Lecture | | |
| COURSE DESCRIPTION | Earth Science is an interfiled study. Students will use the concepts they have learned from their previous Science subjects to understand and appreciate manmade and natural processes on Earth. The subject introduces the core concepts in Geology, Hydrology as well as Meteorology to cover the major spheres of the Earth (namely the lithosphere, hydrosphere and atmosphere). | | |
| COURSE GOAL | 1. Describe how the different spheres of the Earth interact. 2. Classify Earth materials and discuss the processes these materials undergo. 3. Discuss the effects of wind and water in sculpturing the Earth’s surface. 4. Explain the following phenomena (earthquakes, volcanism and mountain-building) through the concepts of plate tectonics. 5. Describe the processes within the ocean and its effects on life. 6. Cite the factors affecting the atmosphere, weather and climate. | | |
| PREREQUISITE | None | **CO-REQUISITE** | None |
| REFERENCES | **Textbook:**  Tarbuck, Edward J. and Frederick K. Lutgens. 2003. Earth Science, 10th Ed. Jurong, Singapore: Pearson Education South Asia Pte. Ltd.  **References**   * Earth Science and the Environment by Graham R. Thompson and Jonathan Turk * Invitation to Science to Science Inquiry by Tik L. Liem | | |
| OTHER SUPPLEMENTAL MATERIALS | * Video Materials * Simulation Materials * Teacher-Prepared Presentations and Worksheets/Handouts | | |
| COURSE REQUIREMENTS | * Quizzes and Periodical Exam * Assignments and Seatwork | | |

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| GRADING SYSTEM | * Periodical Test – 30% Class Standing – 70% * Class standing components (quizzes, seatwork, assignment, laboratory experiments/activities, project-based activities, class participation/behavior) |
| OTHERS | Name: Charity Mulig-Cruz  Class Schedule: (Mon-Fri) 8:30 – 9:30nn  Room No: TBA  Consultation Hours: 10 – 11 am; 4 - 5pm  Room No: IDS Science Office  Name: Joy B. Bagaloyos  Class Schedule: (Mon-Fri) 7:30 – 8:30 am  Room No: TBA  Consultation Hours: 10 – 11 am; 4-5pm  Room No: IDS Science Office |

1. **LEARNING PLAN**

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| 1ST / 3RD QUARTER | | | | | | |
| DESIRED LEARNING OUTCOMES (DLO) | **LEARNING CONTENT** | **TEACHING AND LEARNING ACTIVITIES** | **INSTRUCTIONAL MATERIALS AND REFERENCES** | **ASSESSMENT TASKS AND TOOLS** | **EVIDENCE OF OUTCOMES** | **TIME ALLOTMENT (hour/s)** |
| Identify the scope of Earth Science and compare it to other fields of science. | 1. What is Earth Science? | Lecture | Presentation  Textbook | Pen and Paper Test  Graphic Organizers   * KWLH Charts * Venn Diagrams * Sequence Charts   Journals and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **1** |
| State the different hypotheses explaining the origin of the universe.  Describe the different hypotheses explaining the origin of the solar system.  Trace the Earth’s early stages of development. | * 1. Early Evolution of the Earth | Film Viewing  Lecture | Video  Textbook |
| Explain that the Earth has four subsystems, across whose boundaries matter and energy flow.  Describe and differentiate the parts of the internal structure of the earth according to its composition and properties | * 1. Spheres of the Earth and their interactions | Song Appreciation  Concept Mapping/ Mind Mapping  (Focus Question: How are the spheres of the Earth connected?) | Song (Ang Lahat ng Bagay ay Magkaugnay by Joey Ayala from <https://www.youtube.com/watch?v=_y_nQheGGXg> )  Tablets (with installed Mind mapping or concept Mapping apps) | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * KWLH Charts * Venn Diagrams * Concept Maps or Mind Maps   Journals and Think-Alouds | **1** |
|  | 1. *Minerals* | Lecture | Presentation  Video  Textbook | Pen and Paper Test  Graphic Organizers   * Classification Charts * Venn Diagrams   Journals and Think-Alouds | **1** |
| Differentiate minerals from other earth materials. | 1. Definition of Minerals |  |  |
| State and discuss the properties of minerals. | 1. Properties of Minerals |  |  |
|  | 1. Mineral Groups |  |  |

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|  | 1. *Rock* | Lecture | KWL Chart  Presentation  Video  Textbook | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Classification Charts * Venn Diagrams * Concept Maps or Mind Maps   Journals and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | 1 |
| Differentiate the three rock types from each other.  Discuss the rock cycle. | 1. Rock Cycle | Lecture | Presentation  Textbook |
| Compare and contrast the formation of the different types of igneous rocks. | 1. Igneous Rocks: Formation, Classification (Extrusive/Intrusive based on texture; Composition for naming IR) |  |  |
| Describe the processes involved in the formation of sedimentary rocks.  Describe the different classification of sedimentary rocks. | 1. Sedimentary Rocks: Feature of SR, Sedimentation Process, Classification (Chemical/Detrital) |  |  | Pen and Paper Test  Graphic Organizers   * Classification Charts * Venn Diagrams * Concept Maps or Mind Maps   Journals and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **1** |
| Describe the changes in mineral components and texture of rocks due to changes in pressure and temperature. | 1. Metamorphic Rocks: Agents of Metamorphism, Examples, Introduction on Classification of MR |  |  |
|  | 1. *Weathering ,Soil, Mass Wasting* | Lecture  Film Viewing | Presentation  Video | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Classification Charts * Sequence Charts * Concept Maps or Mind Maps   Inquiry Activity   * Hands-on Problem Solving Rubric   Journals and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **1** |
| Describe the different forms of weathering and their effects on the formation of soil.  Describe how rocks undergo weathering.  Explain how the products of weathering are carried away by erosion and deposited elsewhere | 1. Types & Rates of Weathering, Agents of Erosion (Chemical and Mechanical) |  |  |
| describe how rocks turn into soil;  Create a diagram of the soil profile.  Describe each portion of the soil profile. | 1. Definition of Soil, Controls of Soil Formation, Soil Profile, Soil Types | Optional Inquiry Activity: Identification of Soil Type |  |
| Trace processes and factors affecting soil formation. | 1. Rates & Types of Soil Erosion | Inquiry Activity:   * Extent of Soil Erosion in the Community |  | Pen and Paper Test   * Rubric for Essay   Inquiry Activity   * Hands-on Problem Solving Rubric * Group Task Rubric * Collaborative Work Skills Rubric * Self-Direction Rubric * Presentation Rubric   Graphic Organizers   * KWLH Charts * Venn Diagrams * Classification Charts   Student-Teacher Conference | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **1** |
| Investigate extent of soil erosion in the community and its effects on living things and the environment;  Communicate the data collected from the investigation on soil erosion  Trace processes and factors affecting mass wasting.  Discuss/describe how rocks and soil move downslope due to the direction action of gravity  Identify human activities that trigger mass wasting  Describe various hazards that may happen in the event of mass wasting | 1. Controls & Triggers of Mass Wasting; Classification of Mass Wasting |  |  |
| Describe where the Earth’s internal heat comes from  Describe how magma is formed.  Explain how the seafloor spreads | 1. *Plate Tectonics* | Lecture | Presentation  Video  Simulation Software | Pen and Paper Test   * Rubric for Essay   Inquiry Activity   * Hands-on Problem Solving Rubric * Group Task Rubric * Collaborative Work Skills Rubric * Self-Direction Rubric * Presentation Rubric   Graphic Organizers   * Fishbone Diagrams * Classification Charts   Journal and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **1** |
| Show how the theories of continental drift, seafloor spreading and plate tectonics support each other in proving that the earth is in motion.  Explain how the continents drift  Cite evidences that support continental drift | 1. Development of Plate Tectonics Theory (include proof and evidence) |

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| Show how the theories of continental drift, seafloor spreading and plate tectonics support each other in proving that the earth is in motion. | 1. Type of Plate Boundaries and Structures Associated to these plate type boundaries | Inquiry Activity: (Students will predict the plate boundaries given the landforms/ earthquake records of places on a map). | Map of the World which shows the different plates.  Map of the world that shows the landforms and earth quake frequencies. | Pen and Paper Test   * Rubric for Essay   Inquiry Activity   * Hands-on Problem Solving Rubric * Group Task Rubric * Collaborative Work Skills Rubric * Self-Direction Rubric * Presentation Rubric   Graphic Organizers   * Fishbone Diagrams * Concept Map   Student-Teacher Conference | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | 1 |
| Identify the layers of the Earth’s crust.  Differentiate the layers of the earth.  Describe various hazards that may happen in the event of earthquakes  Give practical ways of coping with geological hazards caused by earthquakes | 1. *Earthquakes & Earth's Interior* | Lecture | Presentation  Simulation (<http://environment.nationalgeographic.com/environment/natural-disasters/forces-of-nature.html?section=v>)  Video |
| Determine the different causes and effects of earthquakes.  Describe how rocks behave under different types of stress such as compression, pulling apart and shearing  using models or illustrations, explain how movements along faults generate earthquakes; | 1. Elastic Rebound Theory | Lecture | Presentation  Video  Simulation |

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| Locate the epicenter of earthquakes given 3 seismograph readings.  Differentiate the  epicenter of an earthquake from its focus;  intensity of an earthquake from its magnitude;  active and inactive faults;  Describe the changes on the Earth‘s surface as a result of earthquakes  Enumerate what to do before, during and after earthquake;  Determine the magnitude of an earthquake given | 1. Seismology: Locating and Measuring an Earthquakes Intensity & Magnitude; Earthquake Predictions | Lecture  Activity:   * Determining the epicenter and magnitude of an earthquake. * School Hazard Evaluation | Sample Seismograms (3 per epicenter)  Travel-time Graph | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Fishbone Diagrams * Concept Map * KWLH   Journal and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | 1 |
| Explain how volcanoes and volcanic landforms are formed.  Describe various hazards that may happen in the event of volcanic eruptions  Give practical ways of coping with geological hazards caused by volcanic eruptions | 1. *Volcanoes & other Igneous Activity* | Lecture | Presentation  Video  Simulation (<http://environment.nationalgeographic.com/environment/natural-disasters/forces-of-nature.html?section=v>) | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Venn Diagrams * Concept Map * KWLH   Journal and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **1** |
| Cite the effects of a volcanic eruption.  Describe what happens after magma is formed (volcanism and plutonism) | 1. Types of Igneous Activity: Intrusive and Extrusive (Volcanic and Fissure Eruptions) |
| Compare each of the 3 major types of volcanoes. | 1. Types of Volcanoes; Anatomy of Volcanoes and Volcanic Landforms | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **1** |
| Compare the different results of intrusive volcanic activities.  Enumerate what to do before, during and after volcanic eruptions;  Describe the changes on the Earth‘s surface as a result of volcanic eruptions; | 1. Nature of Volcanic Eruption: Factors Affecting Viscosity and Types of Volcanic Extrusions |

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| Explain how the movement of plates leads to the formation of folds and faults | 1. *Mountain Building* | Lecture | Presentation  Video  Simulation | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Lists * Concept Map * Venn Diagram/ Classification Chart   Journal and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | 1 |
| Explain how folding and faulting of rocks build mountains. | 1. Factors Affecting Rock Deformation |
| Describe how rocks behave under different types of stress such as compression, pulling apart and shearing | 1. Types of Faults and Folds |
| Explain the isostasy principle. | 1. Isostasy Principle |
|  | 1. *Geologic Time* | Lecture  Inquiry Activity (on Isostacy Principle Teacher Demonstration) | Presentation  Video  Demonstration Materials | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Lists * Sequence Chart * Concept Map   Journal and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **2** |
| Differentiate the concepts of uniformitarianism and catastrophism. | 1. Catastrophism vs. Uniformitarianism |
| Arrange rocks based on their ages using the principles of relative dating.  Describe how layers of rocks (stratified rocks) are formed  Describe the different methods (relative and absolute dating) used to determine the age of stratified rocks  Explain how relative and absolute dating were used to determine the subdivisions of geologic time  Explain how marker fossils (aka guide fossils) were used to determine the subdivisions of geologic time scale | 1. Relative & Radiometric Dating |

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| 2ND /4TH QUARTER | | | | | | |
| DESIRED LEARNING OUTCOMES (DLO) | LEARNING CONTENT | TEACHING AND LEARNING ACTIVITIES | INSTRUCTIONAL MATERIALS AND REFERENCES | ASSESSMENT TASKS AND TOOLS | EVIDENCE OF OUTCOMES | TIME ALLOTMENT |
|  | 1. *Surface & Ground Water* | Lecture | Presentation  Video | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Lists * Sequence Chart * Concept Map   Journal and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **1** |
| Identify and explain the processes involved in the water cycle. | 1. Hydrologic Cycle |
| Describe the profile of a river, identify features associated with it and describe the behavior of river as it moves from the source toward the ocean. | 1. Factors Affecting Stream Velocity |
|  | 1. Works of Streams & Drainage Basins |  |  | **1** |
| Discuss how groundwater creates land forms. | 1. Distribution, Movement & Geologic Work of Groundwater |  |  | **1** |
| Discuss problems associated to groundwater. | 1. Environmental Problems Associated with Groundwater | Article Review: (Students will search for news articles on problems related to water sources and share them to the class.) |  | **1** |
| Discuss the triggers of desertification and glaciations. | 1. *Glaciers, Deserts, & Wind* | Lecture | Presentation  Video  Simulation | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Lists * Sequence Chart * Concept Map   Journal and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **3 (optional)** |
| Describe a glacier and discuss how its movements produce glacial landforms. | 1. Types of Glaciers , Glacial Motion (Glacial Budget) & Landforms Associated to Glaciers |
|  | 1. Effects of Glaciation |
| Discuss how a deserts form. | 1. Location of Deserts |
| Discuss how desert landscapes are created.  Describe the various hazards that may happen in the event of landslides/mass wasting  Give practical ways of coping with geological hazards caused by landslides  Identify human activities that speed up or trigger landslides. | 1. Landforms associated to deserts |
| Describe the structure and evolution of ocean basins | 1. *Ocean Floor* | Lecture | Presentation  Video  Simulation | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Lists * Sequence Chart * Concept Map   Journal and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **1** |
| Describe the major features of the different ocean provinces. | 1. Geography & Mapping the Ocean Floor |
|  | 1. Provinces of the Ocean Floor |
|  | 1. Resources from the Seafloor |
|  | 1. *Ocean Water & Ocean Life* | **2** |
|  | 1. Composition of Seawater |
|  | 1. Ocean Layering |
| Discuss factors affecting ocean productivity. | 1. Diversity of Ocean Life & Oceanic Productivity |
|  | 1. *Dynamic Ocean* | Lecture | Presentation  Video  Simulation | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Lists * Sequence Chart * Concept Map   Journal and Think-Alouds | **2** |
| Differentiate different types of oceanic circulation.  Describe water waves and explain how they are formed. | * 1. Surface & Deep-Ocean Circulation |
| * 1. Waves, Beaches and Shoreline Processes | **1** |
|  | * 1. Shoreline Features |  |  |
| Explain the cause of tides and factors that affect tides. | * 1. Tides |  |  |
| Compare the different layers of the atmosphere. | 1. *Atmosphere: Composition, Structure & Temperature* | Lecture | Presentation  Video  Simulation | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Lists * Classification Charts * Concept Map   Journal and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **1** |
| Describe the changes in the weather over a period of time;  Communicate how different types of weather affect activities in the community;  Discuss the ways by which land, water and air interact and how this interaction creates the weather.  Differentiate weather from climate. | * 1. Weather vs. Climate, Composition and Structure of the Atmosphere |  |  |

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| Differentiate weather, seasons and climates.  using models, relate:   * the tilt of the Earth to the length of daytime; * the length of daytime to the amount of energy received; * the position of the Earth in its orbit to the height of the Sun in the sky; * the height of the Sun in the sky to the amount of energy received; * the latitude of an area to the amount of energy the area receives; | * 1. Earth ś Motion and Seasons | Lecture | Presentation  Video  Simulation | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Lists * Sequence Chart * Concept Map   Journal and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | 1 |
| Explain how the Earth’s motions give rise to the phenomenon of alternating day and night and the regularly changing seasons.  Discuss how energy from the Sun interacts with the layers of the atmosphere; | * 1. Fate of Incoming Solar Radiation; Controls of Temperature |
| Explain how some human activities affect the atmosphere | * 1. Greenhouse Effect |
|  | 1. *Moisture, Clouds & Precipitation* | Lecture | Presentation  Video  Simulation | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Lists * Sequence Chart * Concept Map   Journal and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **1** |
| Describe the relationship between pressure & density of air and temperature & density of air. | * 1. Humidity & dew-point temperature, Measuring Humidity | Activity: Determination of Relative Humidity |  |
| Explain how the different types of clouds and precipitations are produced. | * 1. Processes that Lift the Air, Types of Stability |  |  | **1** |
| Differentiate the various types of clouds and precipitations. | * 1. Cloud Formation & Types of Clouds, The Bergeron & Collision-Coalescence Process, Types of Precipitation, Measuring Precipitation |  |  | **2** |

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|  | 1. *Air Pressure & Wind* | Lecture | Presentation  Video  Simulation | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Lists * Sequence Chart * Concept Map   Journal and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | 1 |
| Identify factors that affect the general circulation of air.  Account for the occurrence of land and sea breezes, monsoons, and intertropical convergence zone | * 1. Understanding Air Pressure, Measuring Air Pressure |  |  |
| Explain how atmospheric temperature and pressure bring about movements of air. | * 1. Factors Affecting Wind, Highs & Lows |  |  |
| Draw and explain the idealized global wind pattern. | * 1. Idealized Global wind Patterns, General Circulation of the Atmosphere |  |  | **1** |
| Compare and contrast El Niño and La Niña. | * 1. El Niño & El Niña Phenomena, Local Wind Patterns |  |  |
| Explain how some severe weather phenomena develop.  Describe the various hazards that may happen in the wake of severe storms | 1. *Weather Patterns & Severe Storms* |  |  | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Lists * Sequence Chart * Concept Map   Journal and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **2** |
| Differentiate the different types of air masses and fronts. | * 1. Air Mass, Fronts & Types of Fronts |  |  |
|  | * 1. Mid-Latitude Cyclones |  |  | **3** |
| Observe the changes in the weather before, during and after a typhoon;  Describe the effects of a typhoon on the community; | * 1. Thunderstorms, Tornadoes & Hurricanes |  |  |
|  | 1. Climate | Lecture | Presentation  Video  Simulation | Pen and Paper Test   * Rubric for Essay   Graphic Organizers   * Lists * Sequence Chart * Concept Map   Journal and Think-Alouds | * At least 50% of the class must pass the pen and paper test. * At least 85% of the students can articulate their thoughts through their journals and think-aloud exercises. * At least 75% of the students can record/present their understanding through graphic organizers. | **1** |
| State the factors considered in classifying climates.  Describe each climate type in the Koppen Climate Classification. | * 1. Koppen Climate Classification |  |  |
|  | * 1. Global Warming |  |  |

Submitted by:

Faculty

Recommending Approval: Approved by:

**PROF. LOUIS MARK N. PLAZA PROF. LEILA V. BERNALDEZ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Chair, Science and Math Dept. Principal Dean, College of Education

**APPENDIX 1: SAMPLE/TENTATIVE ASSESSEMENT TOOLS**

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| **Rubric for Essay**  (from https://www.rcampus.com/rubricshowc.cfm?code=F4A59A&sp=yes&) | | | | | |
| **Criteria** | **No Answer  0 Pts** | **Needs Improvement 1 pt** | **Adequate 2 pts** | **Quality 3 pts** | **Exemplary  4 pts** |
| **Content  (4 pts)** | Did not answer the question. | Answers are partial or incomplete. Key points are not clear. Question not adequately answered. | Answers are not comprehensive or completely stated. Key points are addressed, but not well supported. | Answers are accurate and complete. Key points are stated and supported. | Answers are comprehensive, accurate and complete. Key ideas are clearly stated, explained, and well supported. |
| **Organization  (4pts)** | Did not answer the question. | Organization and structure detract from the answer. | Inadequate organization or development. Structure of the answer is not easy to follow. | Organization is mostly clear and easy to follow. | Well organized, coherently developed, and easy to follow. |
| **Writing Conventions  (4 pts)** | Did not answer the question. | Displays over five errors in spelling, punctuation, grammar and sentence structure. | Displays three to five errors in spelling, punctuation, grammar, and sentence structure | Displays one to three errors in spelling, punctuation, grammar, and sentence structure. | Displays no errors in spelling, punctuation, grammar, and sentence structure. |

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| **Collaborative Work Skills Rubric  (from FLECS Bedford Central Campus LST10)** | | | | |
| **CATEGORY** | **4** | **3** | **2** | **1** |
| **Contributions** | Routinely provides useful ideas when participating in the group and in classroom discussion. A definite leader who contribute a lot of effort. | Usually provides useful ideas when participating in the group and in classroom discussion. A strong group member who tries hard! | Sometimes provides useful ideas when participating in classroom discussion. A satisfactory group member who does what is required. | Rarely provide useful ideas when participating in the group and in classroom discussion. May refuse to participate. |
| **Time Management** | Routinely uses time well throughout the project to ensure things got done on time. Group does not have adjust deadlines or work responsibilities because of this person’s procrastination. | Usually uses time well throughout the project, but may have procrastinated on one thing. Group does not have adjust deadlines or work responsibilities because of this person’s procrastination. | Tends to procrastinate, but always gets things done by the deadlines. Group does not have adjust deadlines or work responsibilities because of this person’s procrastination. | Rarely gets things done by the deadlines **and** group has to adjust deadlines or work responsibilities because of this person’s inadequate time management. |
| **Working with Others** | Almost always listens to, shares with, and supports the efforts of others. Tries to keep people working well together. | Usually listens to, shares with, and supports the efforts of others. Does not cause “waves” in the group. | Often listens to, shares with, and supports the efforts of others, but sometimes is not a good team member. | Rarely listen to, shares with, and supports the efforts of others. Often is not a good team player. |
| **Quality of Work** | Provides work of the highest quality. | Provides high quality work. | Provides work that occasionally needs to be checked/redone by other group members to ensure quality. | Provides work that usually needs to be checked/redone by others to ensure quality. |

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| **Self-Direction Rubric  (from Intel Teach Elements: Inquiry in the Science Classroom)** | | | | |
| **Criteria** | **4** | **3** | **2** | **1** |
| **Goal-Setting** | I set challenging, achievable goals, and identify and access the resources necessary to achieve the goals. | I set achievable goals. I identify and access some resources to achieve the goals. | I begin a task without clearly defined goals. I do not identify necessary resources. | I make no effort to identify a goal or resources to complete goals. |
| **Project Management** | I consistently manage time and resources in an efficient manner to achieve goals. | I usually manage time and resources in an efficient manner to achieve goals. | I manage time and resources with some help to achieve goals. | I need ongoing help in managing time and resources to achieve goals. |
| **Problem Solving** | I consistently review my progress and learning experiences to resolve problems that may be interfering with achieving my goals. | I usually review my progress and experiences to resolve problems that may be interfering with achieving my goals. | With some assistance, I review my progress and experiences to resolve problems that may be interfering with achieving my goals. | With ongoing assistance, I review my progress and experiences to resolve problems that may be interfering with achieving goals. |
| **Using Feedback** | I ask others for feedback and consider their ideas seriously when revising my work. | I consider feedback from many sources when revising my work. | I consider some feedback when revising my work. | I do not consider feedback when revising my work. |
| **Persevering** | I exhibit strong determination to find an answer or solution. I monitor my commitment to the goals, and develop and apply a wide variety of techniques to stay on task. | I exhibit determination to find an answer or solution. I monitor my commitment to the goals, and develop and apply some techniques to stay on task. | I make an effort to find an answer or solution. I do not monitor my commitment to goals. With help, I apply techniques to stay on task. | I make little effort to find an answer or solution. I do not consider techniques to stay on task and give up easily. |

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| **Group Task Rubric  (from Intel Teach Elements: Assessment in 21st Century Classroom** | | | | |
|  | **4** | **3** | **2** | **1** |
|
| **Understanding of Task** | I/we demonstrated an in-depth understanding of the content, processes, and demands of the task. | I/we demonstrated substantial understanding of the content and task, even though some supporting ideas or details may be overlooked or misunderstood. | I/we demonstrated gaps in our understanding of the content and task. | I/we demonstrated minimal understanding of the content. |
| **Completion of Task** | I/we fully achieved the purpose of the task, including thoughtful, insightful interpretations and conjectures. | I/we accomplished the task. | I/we completed most of the assignment. | I/we attempted to accomplish the task, but with little or no success. |
| **Communication of Findings** | I/we communicated our ideas and findings effectively, raised interesting and provocative questions, and went beyond what was expected. | I/we communicated our findings effectively. | I/we communicated our ideas and findings. | I/we did not finish the investigation and/or were not able to communicate our ideas very well. |
| **Group Process** | We used all of our time productively. Everyone was involved and contributed to the group process and product. | We worked well together most of the time. We usually listened to each other and used each other's ideas. | We worked together some of the time. Not everyone contributed equal efforts to the task. | We really did not pull together or work very productively as a group. Not everyone contributed to the group effort. |

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| **Presentation Rubric (from Intel Teach Elements: Inquiry in the Science Classroom)** | | | | |
| **Criteria** | **4** | **3** | **2** | **1** |
| **Scientific Content** | I refer frequently to critical concepts in the presentation and use appropriate scientific terminology correctly, including terms that show advanced understanding. | I refer to relevant scientific concepts and use appropriate scientific terminology correctly. | I leave out some important scientific concepts and seldom use appropriate scientific terminology. | I leave out important concepts and do not use appropriate scientific terminology. |
| **Conclusions** | I synthesize my own experiences and knowledge with the research to draw important and meaningful conclusions about my presentation’s theme. | I synthesize my own experiences and knowledge with the research to draw conclusions about my presentation’s theme. | I try to use my knowledge and the research to draw conclusions, but some of my ideas are not logical or based on credible evidence. | I rarely draw conclusions, and when I do, they are not logical. |
| **Defense of Conclusions** | I answer questions and criticisms thoroughly with relevant examples and information. | I answer questions and criticisms with relevant information. | Sometimes, I am unable to answer questions. | I do not answer questions about my conclusions |
| **Multimedia Features** | I use graphics, video, sound, and other multimedia features effectively to communicate my theme and create interest. I follow all copyright laws when I use multimedia features. | I use some graphics, video, sound, and other multimedia features to enhance and support my key points. | I use graphics, video, sound, and other multimedia features, but some features detract from my key points. | I do not use graphics, video, sound, or other multimedia features, or the ones I use detract from my key points. |
| **Organization** | My presentation begins with a slide that builds curiosity and interest in the theme, organizes information in a logical order, and leaves the audience with an important idea about the theme. | My presentation begins with an introduction that describes the theme in an interesting way, organizes information in order, and concludes with a summary of the most important points. | My presentation has an introduction and a conclusion, but they may not engage the audience in thinking about my theme. The order of the information may not help me communicate the theme. | My presentation is missing an introduction or a conclusion, and is organized in a way that confuses the audience. |
| **Creativity** | My presentation includes unique features that communicate meaningful fresh insights and perspectives in unusual and surprising ways. | My presentation communicates insights in unusual and surprising ways. | I try to communicate fresh insights in unusual and surprising ways, but some of my methods distract rather than support my presentation’s theme. | My presentation is predictable. |
| **Oral Presentation** | I have rehearsed my presentation. I speak clearly and smoothly in an engaging way. I show poise and confidence, interact appropriately with my audience, and handle unexpected problems effectively. | I have rehearsed my presentation. I speak clearly and smoothly. I show poise and audience awareness. | I could have rehearsed my presentation more carefully. Sometimes, my audience loses interest or has difficulty understanding me. | My audience has difficulty following my presentation and understanding me. I did not practice enough. |